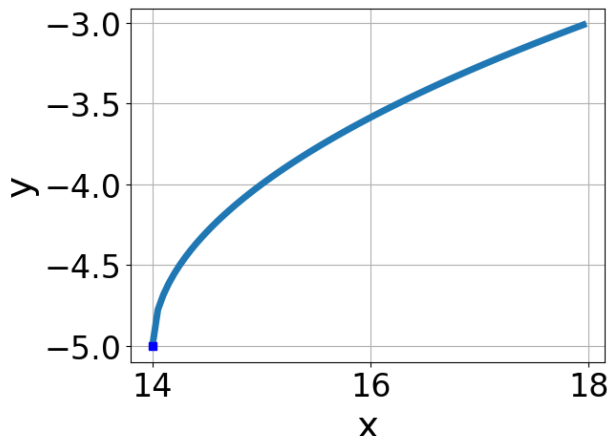1. Choose the equation of the function graphed below.

A. $f(x) = -\sqrt{x + 14} - 5$

B. $f(x) = -\sqrt{x - 14} - 5$

C. $f(x) = \sqrt{x - 14} - 5$

D. $f(x) = \sqrt{x + 14} - 5$

E. None of the above

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2. What is the domain of the function below?

$$f(x) = \sqrt[8]{9x + 4}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [-7.25, -1.25]$

C. $(-\infty, a]$, where $a \in [-1.44, 3.56]$

D. $[a, \infty)$, where $a \in [-0.62, 0.41]$
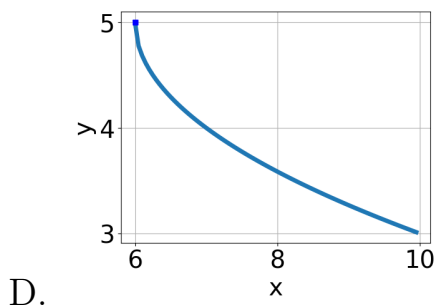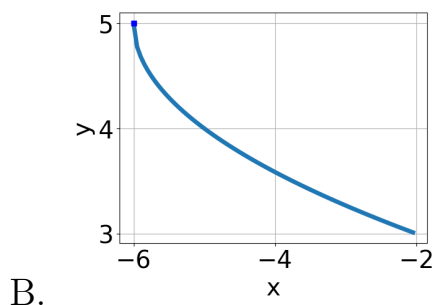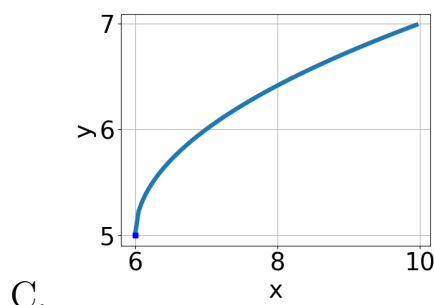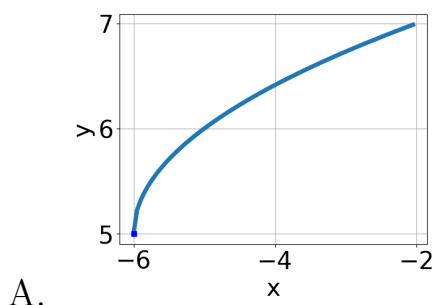
E. $[a, \infty)$, where $a \in [-3.38, -1.86]$

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3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{42x^2 + 81} - \sqrt{117x} = 0$$

    A. All solutions lead to invalid or complex values in the equation.

    B. $x_1 \in [-1.58, -1.41]$ and $x_2 \in [-3.9, 1.3]$

    C. $x \in [1.3, 1.65]$

    D. $x_1 \in [1.16, 1.31]$ and $x_2 \in [0, 2.4]$

    E. $x \in [1.16, 1.31]$

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4. Choose the graph of the equation below.

$$f(x) = -\sqrt{x+6} + 5$$

A.

C.

B.

D.

    E. None of the above.

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5. What is the domain of the function below?

$$f(x) = \sqrt[5]{7x - 6}$$

    A. The domain is $(-\infty, a]$, where $a \in [0.74, 1.13]$

    B. The domain is $[a, \infty)$, where $a \in [0.58, 1.1]$

    C. The domain is $(-\infty, a]$, where $a \in [1.05, 1.29]$
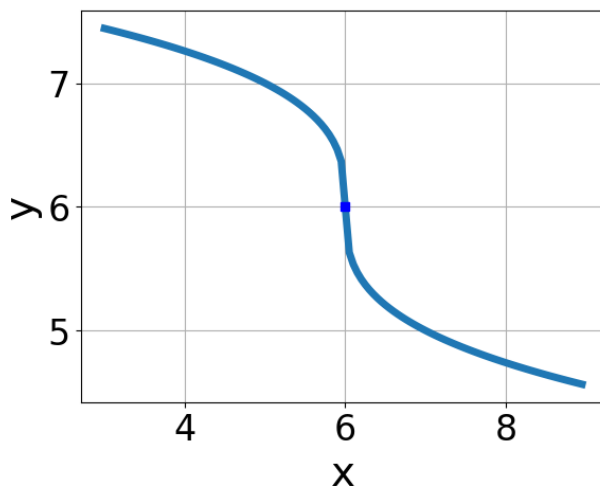
D. The domain is $[a, \infty)$, where $a \in [1.06, 1.55]$

E. $(-\infty, \infty)$

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6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{8x + 3} - \sqrt{2x - 3} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x_1 \in [-0.89, -0.14]$ and $x_2 \in [1.5, 5.5]$

C. $x \in [-0, 0.25]$

D. $x \in [-1.28, -0.55]$

E. $x_1 \in [-1.28, -0.55]$ and $x_2 \in [-6.38, 0.62]$

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7. Choose the equation of the function graphed below.

A. $f(x) = \sqrt[3]{x + 6} + 6$

B. $f(x) = -\sqrt[3]{x - 6} + 6$

C. $f(x) = \sqrt[3]{x - 6} + 6$

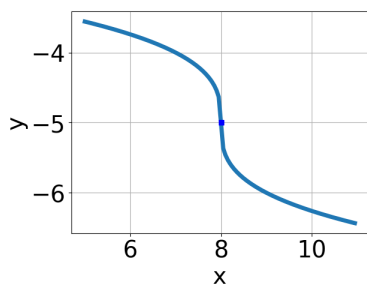D. $f(x) = -\sqrt[3]{x + 6} + 6$

E. None of the above

8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.
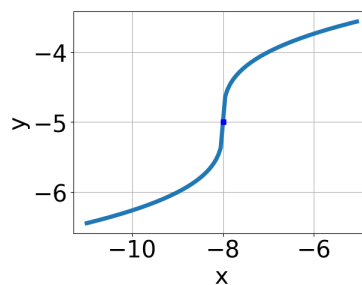
$$\sqrt{-72x^2 - 35} - \sqrt{103x} = 0$$

A. $x \in [-0.58, -0.54]$

B. $x \in [-2.23, -0.79]$

C. $x_1 \in [0.48, 0.89]$ and $x_2 \in [-0.44, 8.56]$

D. $x_1 \in [-2.23, -0.79]$ and $x_2 \in [-3.56, 0.44]$

E. All solutions lead to invalid or complex values in the equation.
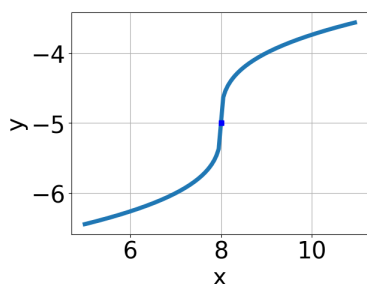
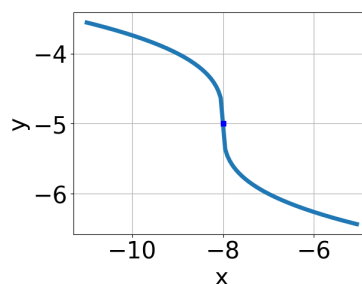9. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x - 8} - 5$$

A.

C.

B.

D.

E. None of the above.

10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-4x + 5} - \sqrt{8x - 3} = 0$$

A. $x \in [0.03, 0.27]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [0.65, 0.93]$ and $x_2 \in [-0.75, 4.25]$

D. $x_1 \in [0.26, 0.42]$ and $x_2 \in [-0.75, 4.25]$

E. $x \in [0.65, 0.93]$